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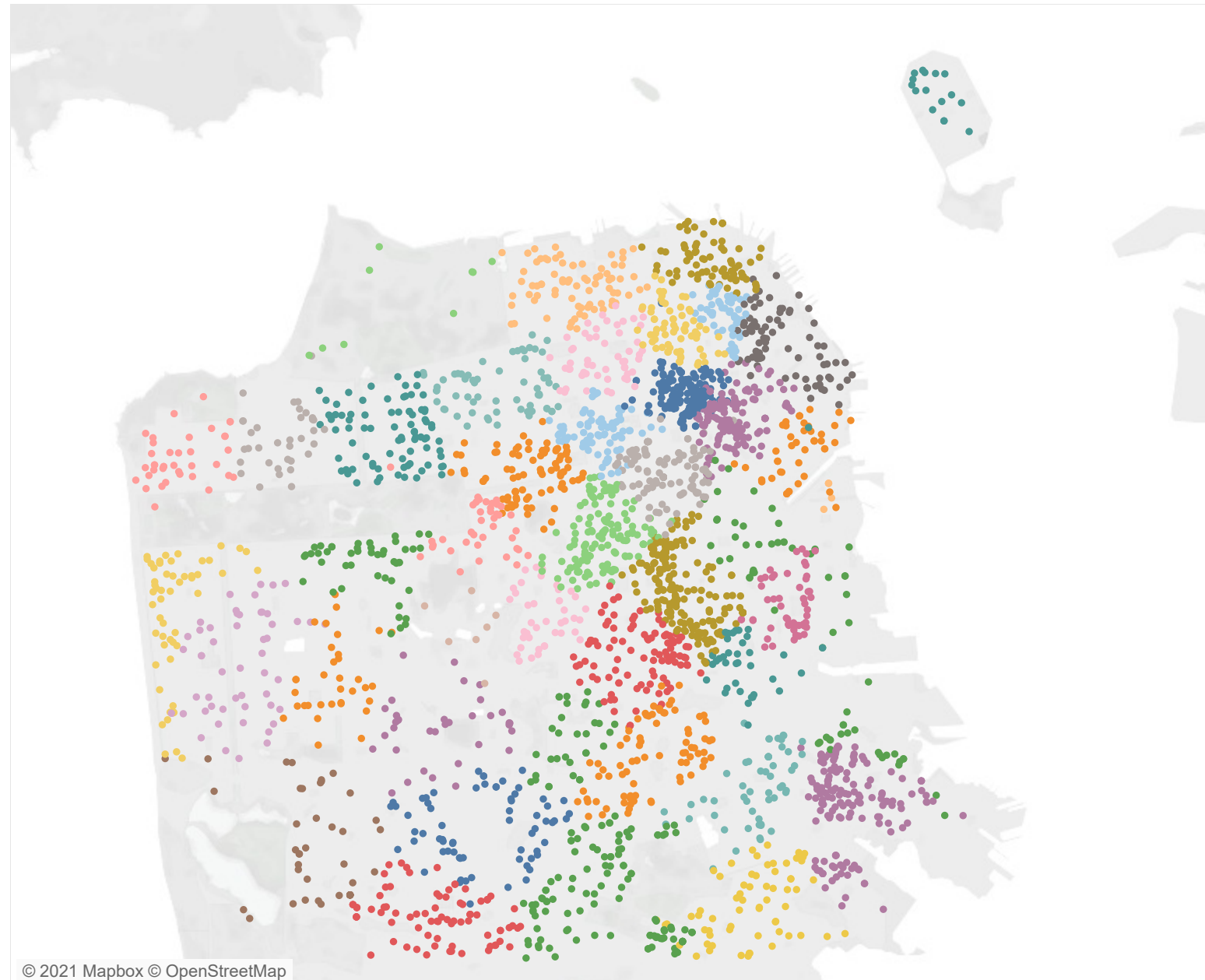
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San Francisco Fire Department Assessment A Look at Building Fires

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2/28/2021

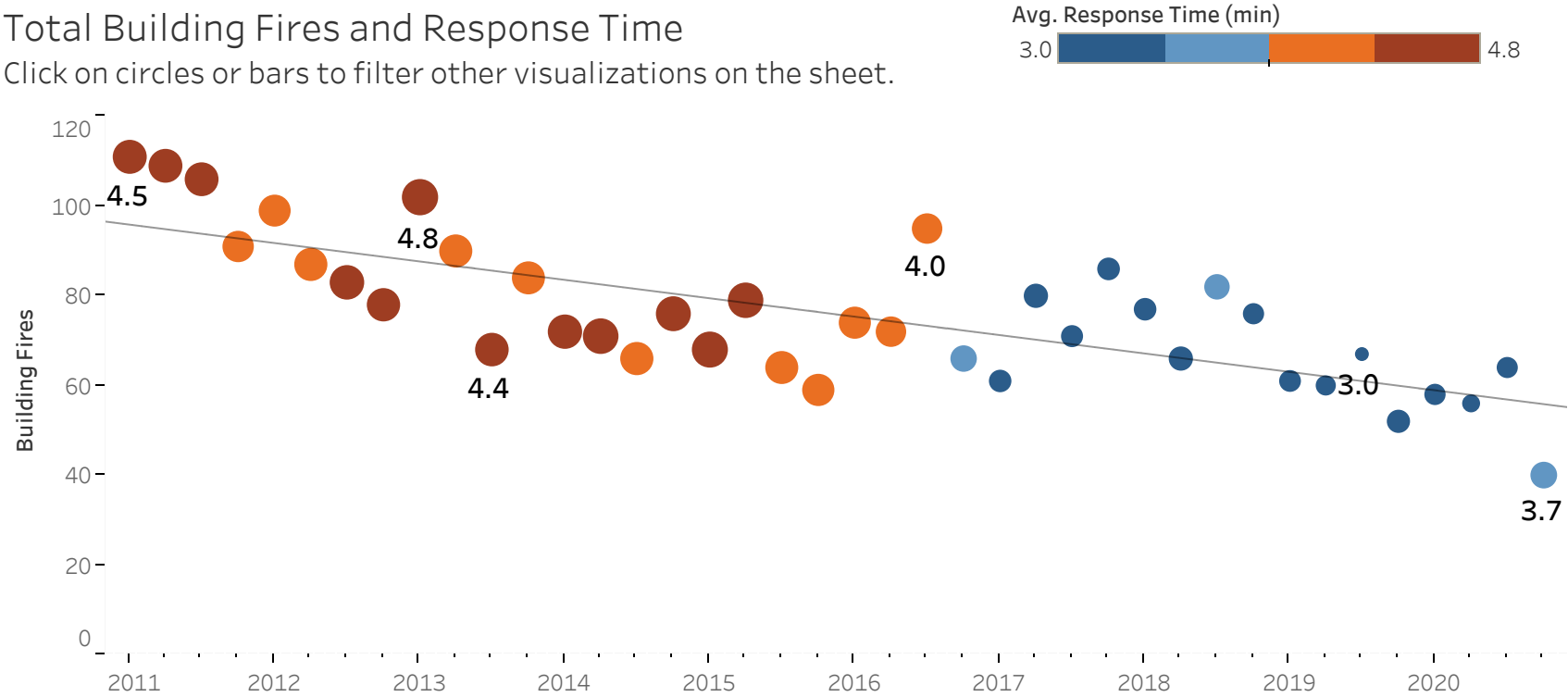
The City of San Francisco has 44 fire stations responsible for attending to fires as well as other emergency needs of the city. This assessment will only focus on building fires and how the department is responding to them.

Shown is a city map of the location of building fires since 2011. The response by each station is color coded to show the complexity of this system.

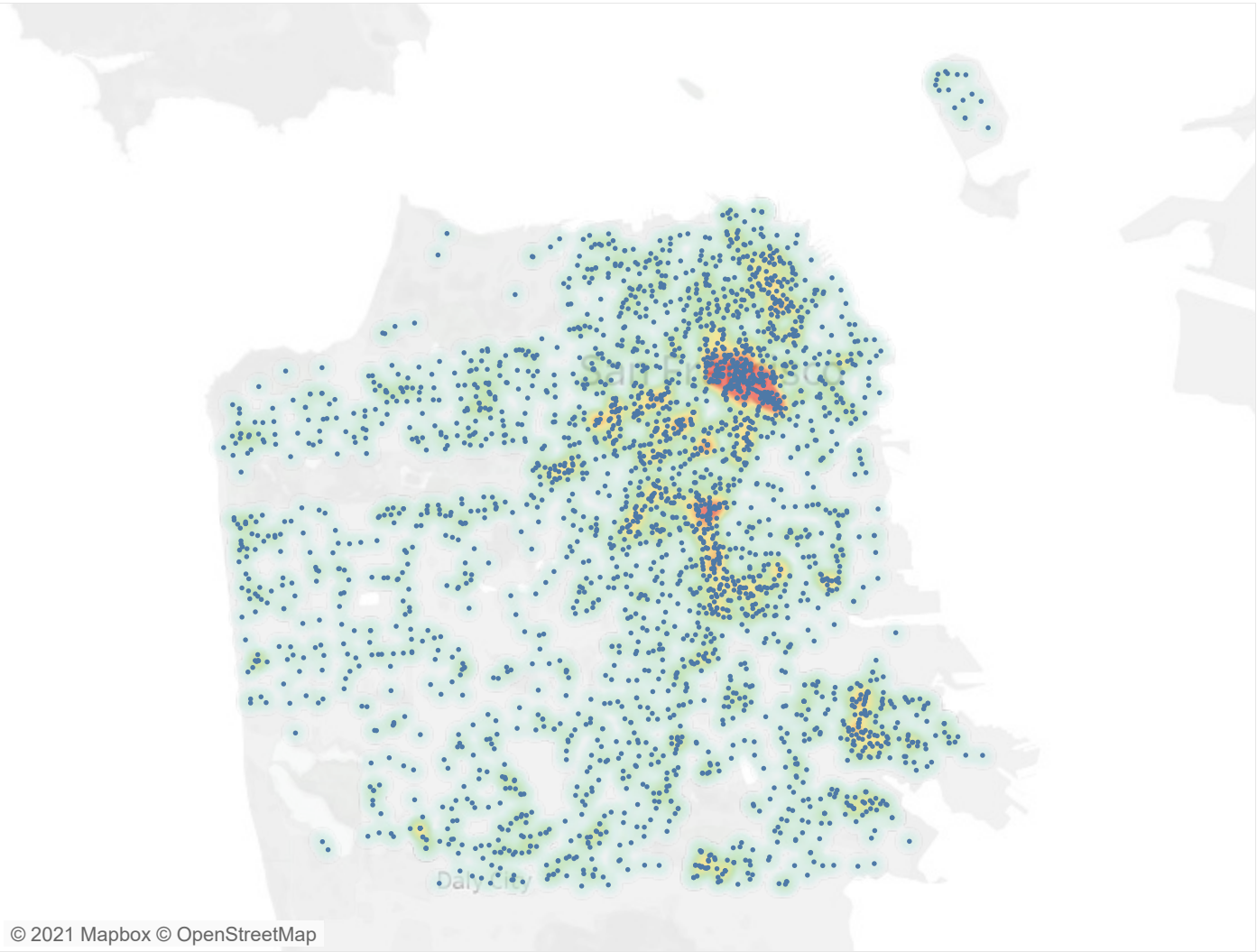


Total Building Fires and Response Time

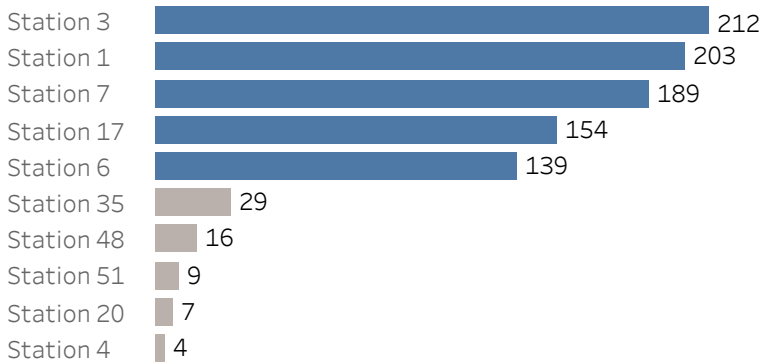
Click on circles or bars to filter other visualizations on the sheet.



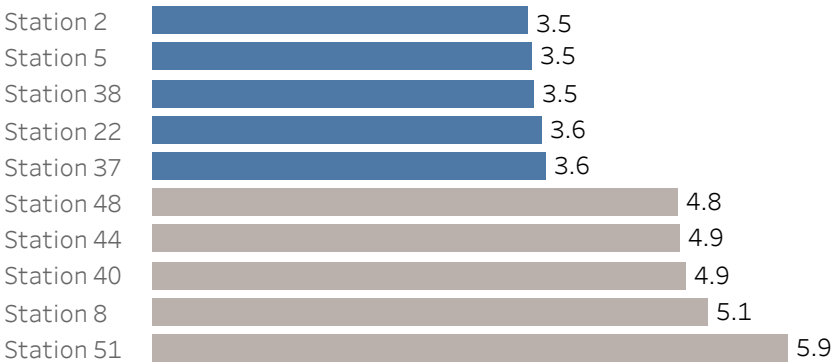
Building Fire Density



Building Fires by Station (Top and Bottom 5)

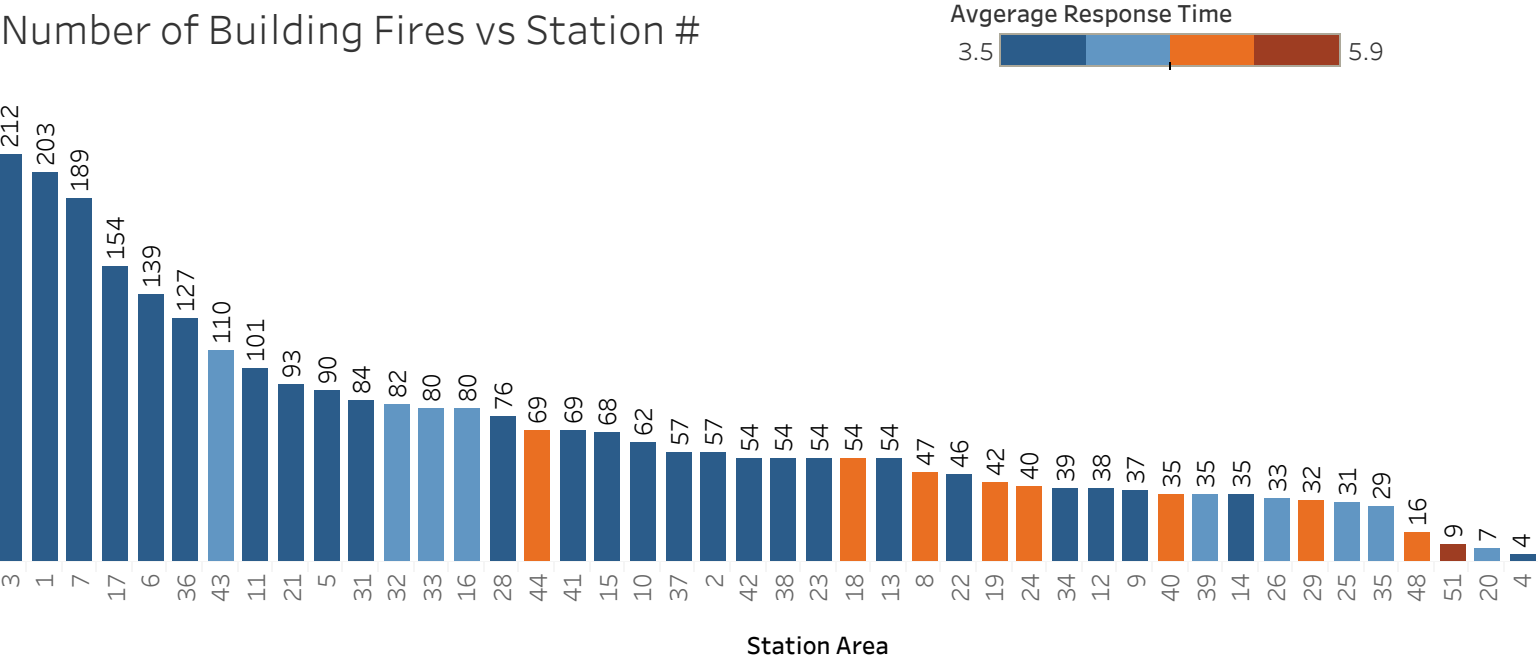


Response Time, Average Minutes (Top and Bottom 5)



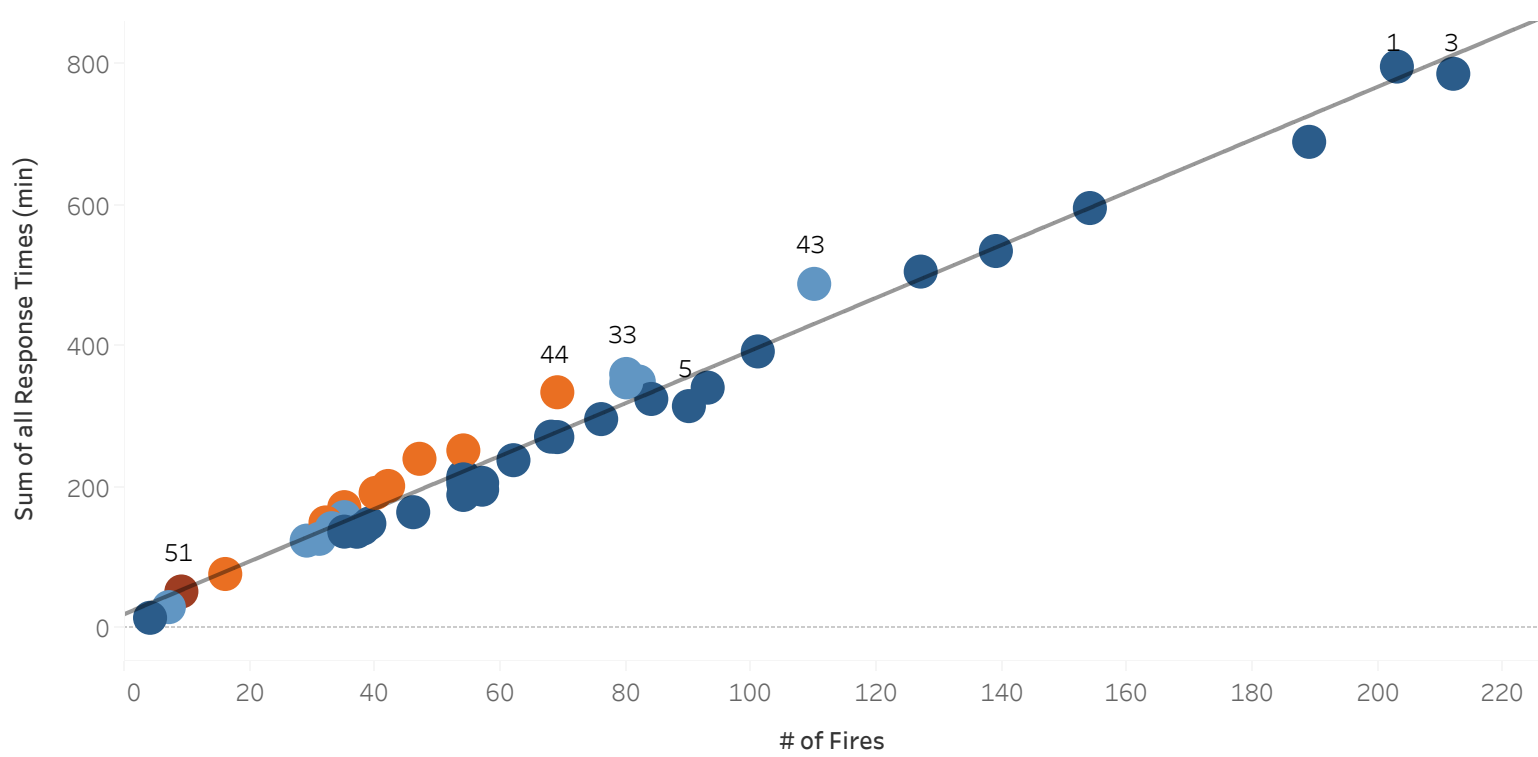
- Fires continue steady decrease, 100 fires per quarter in 2011, now closer to 60.
- The response time is decreasing along with the decrease in building fires.
- Stations 3 and 1 have the most building fire calls which both serve the Tenderloin neighborhood.
- Stations 5 and 2 have the fastest response time.

Number of Building Fires vs Station #

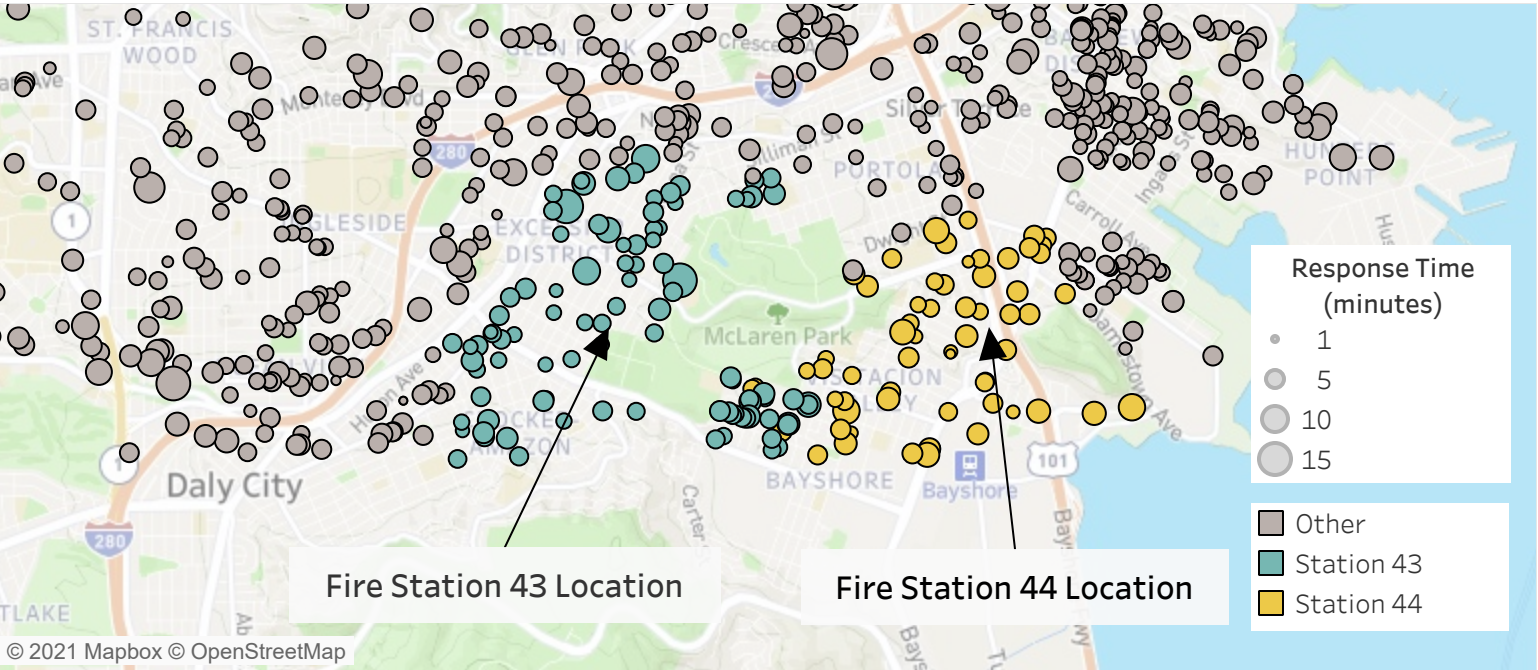


Response Time KPI

Avg Response for Each Station Compared to Total Response Time vs # of Fires

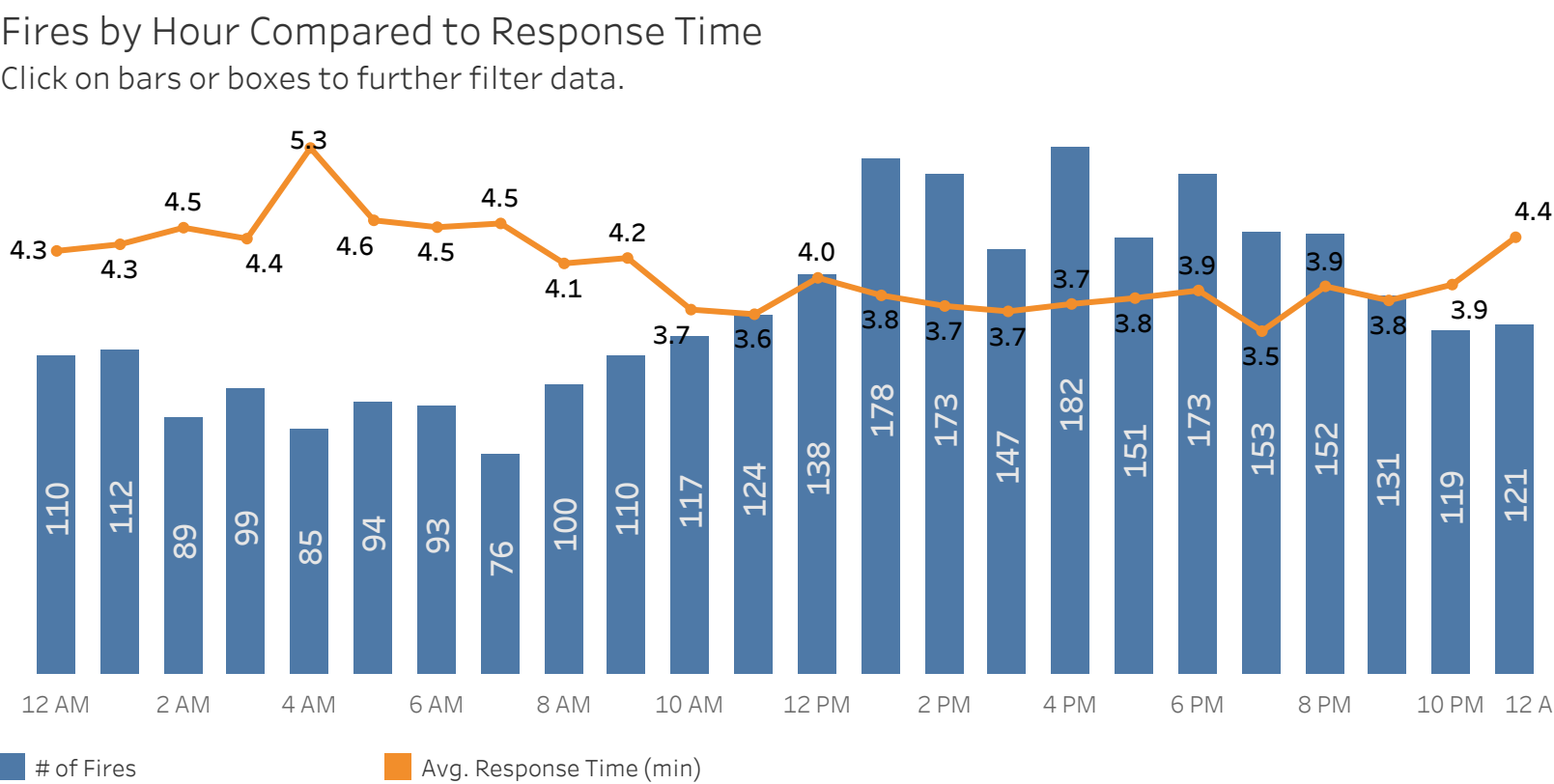


Map of Stations 43 and 44



- Stations 1 and 3 have most calls, but good average response time.
- Station 51 has worst response time. Efficiency would have limited impact due to few fire calls.
- However, per the response time KPI, Stations 43 and 44 have the largest deviation from the trend line.
- The sum of their response times is greater than expected given the number of fires they responded to.
- Improving these stations would be the most effective use of resources.
- Map shows the fires that stations 43 and 44 were called to.

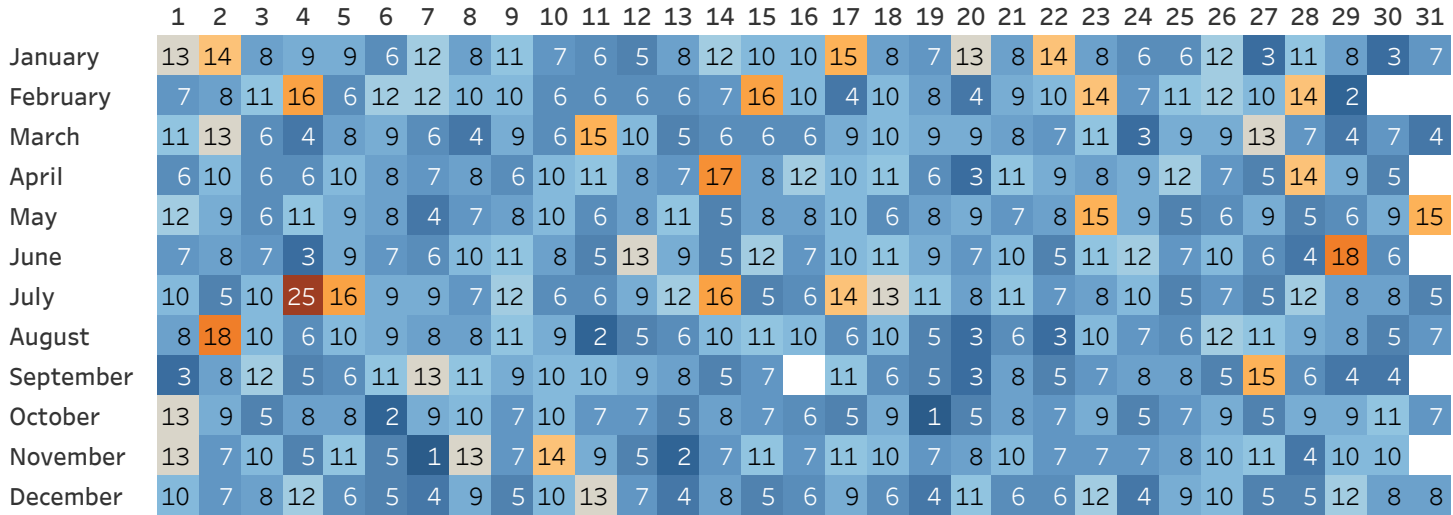
Suggest monitoring these stations further to determine if there are inefficiencies which could be addressed.



Year of Fire

All

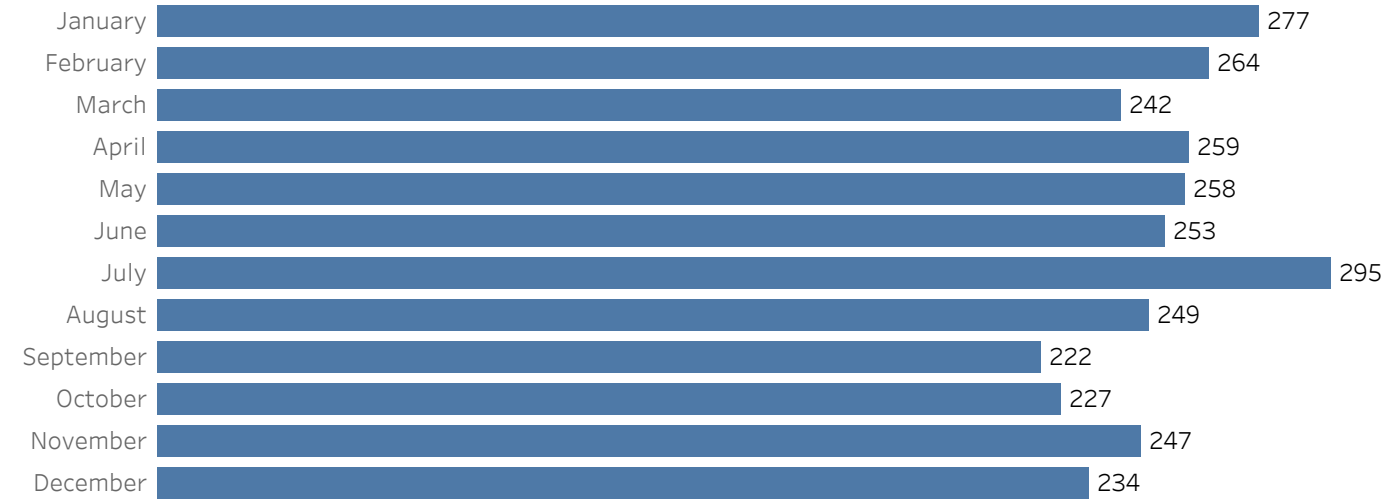
Heat Map: Fires by Month and Day



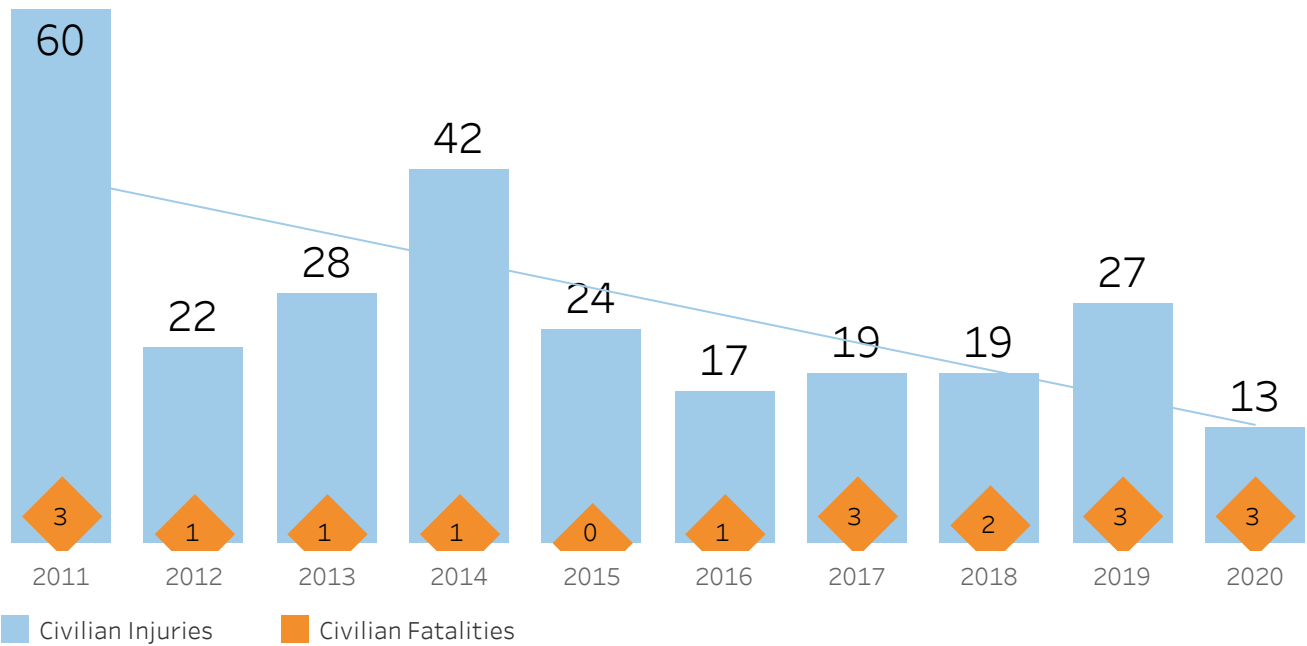
- The number of building fires increases during daylight hours as expected.
- The response time is also faster during these daylight hours, averaging about 3.7 minutes.
- It does not seem that the response is affected by additional road congestion during rush hour.
- During the overnight hours, the response time suffers by approximately 1 minute. Fortunately, there are about half the calls during these times.
- The busiest month is July and the busiest date is July 4th by far.

Be aware of the slower response time during overnight hours and to prepare for a potential of house fires on holidays.

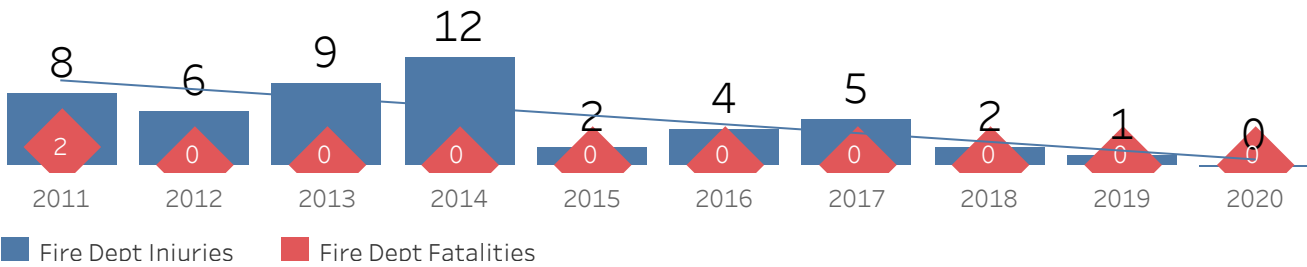
Fires per Month



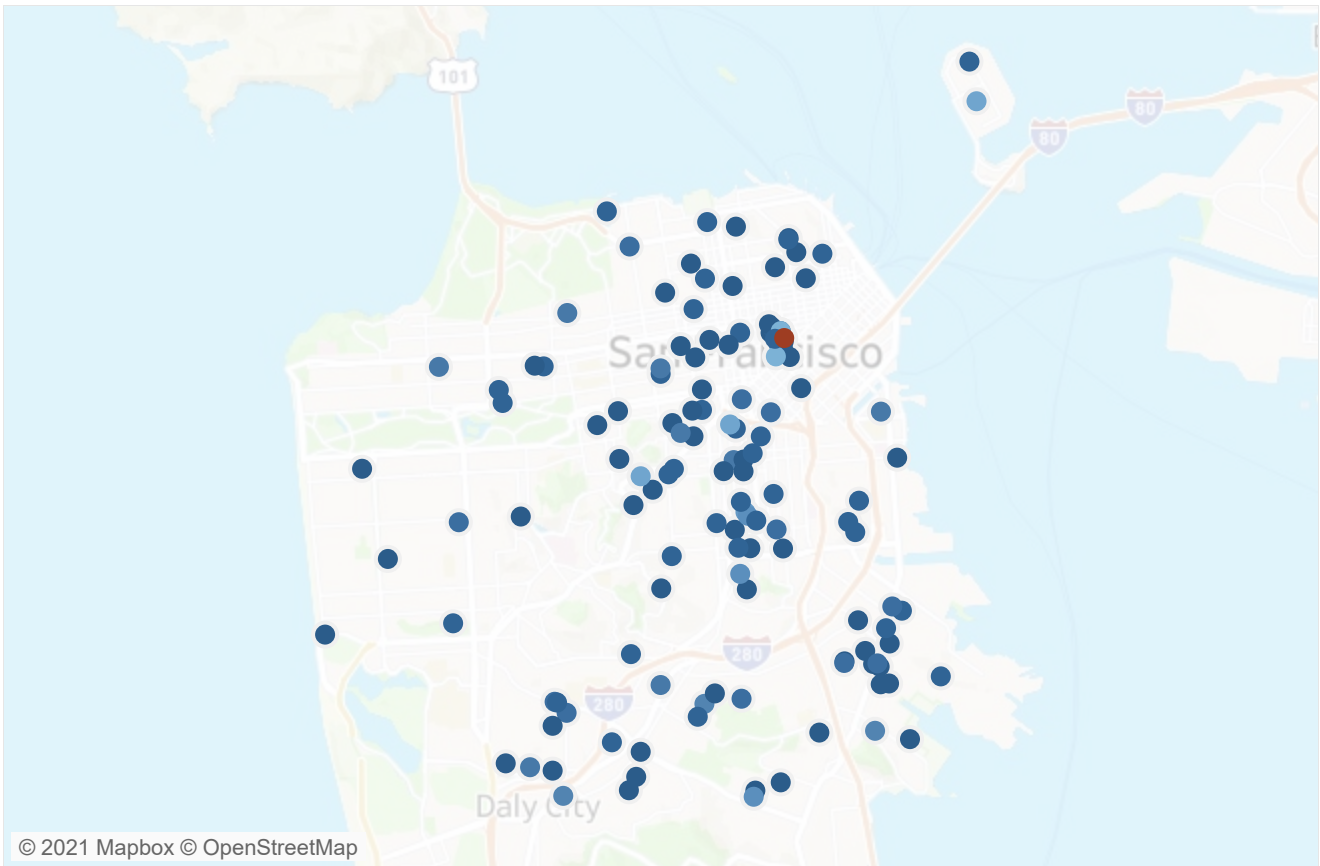
Civilian Injuries and Fatalities



Fire Department Injuries and Deaths



Map of Injuries and Fatalities



● All Fatalities and Injuries
○ Only Fatalities



Year of Fire
All
Station Area
All

- The number of civilian injuries is decreasing, while the fatalities are mostly stable.
- The number of fire department injuries are decreasing.
- After having two fatalities in 2011, there have been no fire department fatalities since.

Summary

- The department overall has a great response to building fires. The stations are evenly spaced and well thought out.
- The downtown stations get more calls, but its unavoidable due to the density of the area.
- The response time to fires has consistently improved over the years.
- Stations 43 and 44 would have the most impact by improving response time.
- The overnight shift is about a minute slower to respond to fires.
- The safety of the population seems to be improving with fewer fires and fewer injuries.
- The safety of the fire department is doing well since the deadly fire of 2011. There are no fatalities and few injures since then.

Suggestions

- Take an internal look at stations 43 and 44 to see if any improvements can be made.
- While realizing that sleeping firefighters are likely the cause of a slower response at night, investigate if there are any factors which could drive an improvement.
- Continue to spread public awareness on fire dangers and keeping buildings to code to continue the decreasing trend of fires and the injuries which result from them.